

Technical Support Services Contract

USAID Contract EEE-C-00-01-00020-00

1st Quarterly Report FY2005
October 1 - December 31, 2004

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PREFACE

The Technical Support Services Contract (TSSC) for the U.S. - Asia Environmental Partnership (US-AEP) is comprised of two principal teams: Program Support and Operational Support. TSSC staff is located in Bangkok, Delhi, Hanoi, Jakarta, Manila, Colombo and Washington DC.

Program Support staff offers technical assistance in implementing activities in all US-AEP countries, with a principal focus on urban and industrial programs, as detailed in the 2005 US-AEP Country Work Plans. Program Support staff also oversee the administration of TSSC Grants and Short-Term Technical Assistance.

Operational Support team members provide technical and administrative support to TSSC Program Support staff and TSSC Country Program Coordinators as well as US-AEP / USAID personnel. TSSC assists in partnership collaboration and development and leads US-AEP's communication activities. Operational Support staff also ensures the smooth-running of TSSC operations, including results reporting, systems management, grants and STTA administration, invoicing and related financial operations, as well as various administrative functions.

This report covers the activities of the TSSC for the first quarter of fiscal year 2005, the period from October 1, 2004 – December 31, 2004. These activities are reported under two categories: Program Support and Operational Support.

Program Support activities are summarized under the following headings:

- Regional Activities
- Country Activities

Operational Support activities are summarized under the following headings:

- Grants and Short Term Technical Assistance (STTA)
- Communications
- Regional Operations Support
- US-AEP Annual Report and Program Results
- Invoices & Budgeting Quarter 1 Fiscal Year 2005

A synopsis of TSSC's quarterly activities is provided in the following Executive Summary.

EXECUTIVE SUMMARY

Regional Activities

During the first quarter of the FY05 fiscal year, TSSC provided support at the regional level at both the program technical and operational level. Technical support in the first quarter focused on supporting US-AEP's participation in the annual Better Air Quality (BAQ) conference in Agra, India and on revising the US-AEP FY05 Regional Work Plan. US-AEP is providing innovative air quality management activities in a number of Asian countries and shared some of these experiences at the BAQ. TSSC Vietnam's Phan Quynh Nhu provided an opening ceremony address highlighting Vietnam's progress implementing commitments made at the 2003 BAQ conference. TSSC's regional staff directed a BAQ workshop on planning and implementing successful air pollution awareness campaigns. Participants in the workshop formed a communications network and requested continuing support for regional coordination and technical input. Additional technical support included overseeing the completion of the Regional Work Plan, including drafting sections on specific activities as well as coordinating inputs from other implementing partners.

TSSC also provided substantial operational support at the regional level during the first quarter of FY05. This support included support for finalizing the FY05 Country Work Plans, finalizing and printing regional and program fact sheets, initiating work on web site revisions, designing and producing a US-AEP exhibit booth for BAQ, and preparing additional materials on US-AEP air quality activities for distribution at BAQ. TSSC supported the development of US-AEP inputs to the Regional Development Mission/Asia (RDM/A) annual report through the collection and compilation of data on program performance indicators and assistance in the drafting of US-AEP contributions to the annual report narrative sections. TSSC also supported US-AEP responses to requests for OPIN water and energy reporting.

The TSSC continued to manage its grants and short-term technical assistance (STTA) programs, overseeing 15 existing grants and issuing 8 new grants and overseeing 8 existing STTA contracts and issuing 7 new contracts. In addition, the TSSC oversaw the first round of quick response grant competition, evaluating 17 applications that resulted in the selection of 10 grant applications for funding.

Improved Air Quality

TSSC continued to support and develop air quality activities in a number of US-AEP countries. In the Philippines, building on the success of the Puerto Princesa Clean Air Program, TSSC identified several local government units interested in replicating the program and initiated discussions with city officials. TSSC has also been working with the League of Cities of the Philippines (LCP) to explore the viability of an environmental unit to provide assistance to member cities. TSSC helped develop a grant to conduct the first national symposium on air resources management in Sri Lanka, providing a platform for air quality professionals to share experiences and best practices, and promote research. As part

of a waste reduction and renewable energy initiative, TSSC provided technical assistance and leadership to develop a greenhouse gas emission reduction project at Bloemendal Waste Dump in Colombo. TSSC continues to support the Diesel Project in Thailand, particularly the process of developing comprehensive baseline emission testing of diesel vehicles. TSSC is responsible for the acquisition of testing vehicles and coordinating the daily task of bringing vehicles to the Pollution Control Department laboratory for testing. During this quarter, 40 percent of proposed vehicles were tested. TSSC supported a host of air quality initiatives in Vietnam including: working with the Swiss Foundation for Technical Cooperation to incorporate US-AEP's recommendations on fuel and vehicle specifications and air monitoring into the Swiss-Vietnamese Clean Air Program; grant support for a survey of oil companies and vehicle manufacturers to determine their capabilities to meet Euro standards; support to EMBARQ, the World Resources Institute's Center for Transport and Environment, to improve the sustainability of present and future transport; grant support for training personnel to monitor roadside air pollution in Hanoi; and moderating a group discussion on launching a pollution charge program for a joint US-AEP-Department of Natural Resources and Environment workshop.

Improved Water Quality, Supply and Sanitation

TSSC continued to support river and river basin environmental management and potable water programs in the region, particularly the effort to improve the water quality of the Kelani River, Colombo's primary source of potable water and the large scale Thachin River Basin (Community-Based Environmental Management) Project in Thailand. TSSC worked with US-AEP staff and partners to combine improvement projects into a single strategy and planned a technical workshop to develop the Thachin Technical Network of water quality management experts who will share their know-how with Thachin communities and local governments. In Vietnam TSSC provided technical assistance to the Office of the National Water Resource Council to develop a plan for successful management of rivers and aquifers, including determining allowable levels of water extraction.

TSSC also guided the development of several new wastewater initiatives including a grant application to evaluate wastewater treatment technologies for effluents from vehicle service stations in Sri Lanka and support to the Delhi Jal Board's integrated water resource management study that indicated a significant potential for water savings through recycling wastewater effluents from treatment plants

Improved Waste Management

TSSC continued to provide leadership and technical assistance to efforts throughout US-AEP countries to improve hazardous waste management. In the Philippines TSSC supported the planning for a Chemical and Hazardous Waste Emergency Response program, facilitating a study exchange to the U.S. for 18 key officials, initiating discussions with the private sector, and organizing a presentation for the National Disaster Coordinating Council. TSSC also presented findings to the Department of Environment and Natural Resources on the use of waste as alternative fuel for cement kilns and reviewed a grant proposal for conducting training for permitting and inspection of cement kilns using hazardous waste fuel. TSSC also supported activities in the Philippines to develop sustainable funding mechanisms for solid

waste management. TSSC provided technical assistance to help create a road map for setting up hazardous waste management facilities in the state of Orissa, India. And in Vietnam, TSSC is developing a PCB Management Plan with the Vietnam power sector to help define and adopt policies and strategies to reduce PCBs.

Improvements in Energy and Industry

US-AEP and TSSC continue to actively support the Philippine Environmental Partnership Program (PEPP) to provide incentives for voluntary compliance with environmental laws to curb industrial pollution. In this quarter TSSC facilitated a review of the draft implementing manual for PEPP by the Environmental Management Bureau and solicited final comments.

Improved Environmental Governance

TSSC is supporting a range of environmental governance activities from environmental training for the Philippine judiciary to improved municipal environmental management for three Thai cities through a partnership with Portland, Oregon. In Vietnam TSSC is supporting the Chemical Society of Vietnam, which is taking the lead role in initiating and implementing Responsible Care activities among the chemical and allied industries. TSSC provided technical assistance to develop the organizational charter, short and long term plans, and training and other materials.

REGIONAL ACTIVITIES

Support to CAI-Asia - Better Air Quality (BAQ) Conference

More than 30 participants from nine Asian countries shared experiences, discussed lessons learned, and received training on planning and implementing successful air pollution awareness campaigns at a workshop developed by the TSSC Regional Manager as a side event associated with the annual Better Air Quality Conference (BAQ) in Agra, India,. The workshop included presentations, discussions, and participatory activities. Participants said the presentation by the Delhi-based NGO the Centre for Science and the Environment (CSE), on its aggressive, science-based communications strategy was particularly valuable. Participants also said they appreciated the opportunity to network and learn from practitioners throughout the region about similar air pollution awareness efforts. Participants developed an informal communications network and a set of recommendations for planning and implementing awareness campaigns, and requested continuing support for regional coordination and technical input in this area.

On the invitation of the Asian Development Bank's (ADB) Clean Air Initiative for Asia (CAI-Asia) and BAQ organizers, TSSC Vietnam's Phan Quynh Nhu presented "Implementation of BAQ 2003 Commitments for Vietnam" during the opening ceremony. The US-AEP program in Vietnam plays a leading role in supporting clean air initiatives in Vietnam, including supporting Vietnamese agencies and stakeholders, and also in coordinating and promoting donor activities.

The BAQ organizers also tapped Ms. Nhu to facilitate the discussion for the Vietnam country group, one of twelve country groups meeting to discuss future plans for air quality management activities in their respective countries. Fourteen Vietnamese participants and air quality management experts participated in this session to discuss air quality monitoring, emission inventories, indoor air pollution, and public awareness.

Prior to BAQ the TSSC Bangkok team prepared a request memorandum for the U.S. Ambassador to India to participate in BAQ 2004. Unfortunately the Ambassador was not able to attend.

TSSC Philippines identified national leaders in air quality management and coordinated their participation, including representatives from the cities of San Fernando La Union and Puerto Princesa, the Environmental Broadcasters Circle and the League of Cities in the Philippines. The Philippines team also assisted in developing BAQ presentation materials and documents on lessons learned through the development and implementation of the Philippines Clean Air Program.

TSSC Sri Lanka assisted the Country Manager in identifying and coordinating the participation of nine delegates to the BAQ Conference. The TSSC Country Program Coordinator participated in the workshop "Economic Analysis for Air Quality Management: Tools and Examples."

The CAI-Asia Secretariat hosted an informal meeting to discuss the Air Pollution Health and Poverty Study for Ho Chi Minh City, for which US-AEP Vietnam is providing in-country logistical support. Experts from ADB, CAI-Asia, Health Effects Institute (HEI), NILU, HCMC Environmental Protection Agency discussed plans for implementing the study.

Regional Work Plan Development

The TSSC Regional Manager provided additional support for revising the FY2005 regional work plan, including the addition of an activity to support ASEAN's Framework for Environmentally Sustainable Cities program, and changes to the Lessons Learned activity based on discussions with the US-AEP Regional Coordinator and relevant implementing partners.

INDIA**Improving Urban Water Supply & Sanitation**

Delhi Jal Board

TSSC provided support to the Delhi Jal Board's (DJB's) integrated water resource management study to evaluate the feasibility of recycling wastewater effluents from current and future treatment plants in a de-centralized manner. As part of the current study, evaluation of the feasibility of using low pressure immersed membrane technology for tertiary treatment at Okhla Sewerage Treatment Plant was undertaken.

A preliminary study indicated a potential for water savings of up to 400 million gallons per day (MGD) through the use of the recycled water by the National Thermal Power Corporation (NTPC). The recycled water can be used by NTPC in their cooling towers. Other major potential uses for the recycled water were identified as process use by nearby industrial estate and non-contact use by big hospitals. TSSC followed up with the main stakeholders to find ways to implement these measures.

Nagpur Municipal Corporation

TSSC has been working with the Nagpur Municipal Corporation (NMC) in Central India in to develop a scope of work for a leak detection study on "unaccounted for water" (UFW). TSSC recommended the following activities for funding in the NMC UFW project:

- A workshop to illustrate the leak detection concept amongst all the stakeholders including municipal officials and consumers.
- Training and education on administrative and technical issues for appropriate municipal officials.
- Introduction of procedures for leak detection and use of modern leak detection equipment, including demonstrations in a few municipal wards.
- Vetting of NMC's ongoing water audit work.
- Strengthening, training, capacity building of the existing Watergy activity cell within the NMC.

Improving Hazardous Waste Management

Orissa Industrial Infrastructure Development Corporation

The TSSC facilitated a visit by a U.S. hazardous waste expert to the Orissa Industrial Infrastructure Development Corporation (IDCO) to help create a road-map for setting up hazardous waste management facilities within the Eastern State of Orissa.

TSSC's work to facilitate this process has included: working with IDCO and the Orissa Pollution Control Board (OPCB) on site selection and planning for a centralized treatment storage and disposal facility (TSDF) in Rourkela, Orissa; visiting potential sites in Birmatrapur district and Bisra Stone Company; and, organizing a seminar for the industrial units around Rourkela to further the process.

TSSC, with the US expert, briefed IDCO on the findings in Rourkela, which are summarized below:

- a complete waste inventory is needed before considering a TSDF at Rourkela;
- the largest waste producer claimed to have significantly reduced waste through recycling and reuse programs;
- if the expected 30,000 metric tons per year of hazardous waste does not materialize after the inventory, IDCO should consider a smaller site (about 13 acres) which is only about 14 km from Rourkela;
- all future industrial estates should have about 70+ acres allocated for a centralized TSDF, and all industries moving in to the estate should use the centralized TSDF. IDCO provided plans for the three new industrial estates being developed for Orissa, and showed that the land for a centralized TSDF is available and would be set aside for this purpose.

Environmental Education Capacity Building

The TSSC CPC worked to develop a teacher's training workshop under the Eco Watch program, conducted by Ashoka Trust for Research in Ecology and Environment (ATREE) in Darjeeling for about 40 teachers and about 20 students. The participants found the topics relevant and useful.

Improving Energy Efficiency

TSSC, along with Energy Wise India staff, participated in a review of training materials to be used at Industrial Training Institutes. The documents will educate tradesmen (i.e., electricians) on basic energy management for different types of equipment, and thus allow them to influence energy conservation practices in their professional careers.

Administration

TSSC worked with US-AEP India Regional Managers and other staff to review and assist potential applicants for the Quick Response Grants program.

INDONESIA

For information on US-AEP/Indonesia activities, please refer to the US-AEP monthly reports that Suzanne Billharz submits directly to USAID.

In February 2005, Mr. Arie Istandar is expected to join US-AEP in Jakarta and will contribute technical reports to the TSSC Quarterly Report.

PHILIPPINES**Improving Air Quality**

Replicating the Clean Air Program for Tricycles in Local Government Units

TSSC facilitated a series of free maintenance and repair workshops for tricycle driver associations in Puerto Princesa (April to July 2004). Building on the success of the program in Puerto Princesa, TSSC identified other local government units interested in replicating the program and initiated discussions with officials from four other cities -- San Fernando City, Tagbilaran, Naga City and Lipa City.

The TSSC also continued discussions with the Motorcycle Development Program Participants Association (MDPPA) and the City Government of San Fernando on the replication and implementation of an Inspection and Maintenance Workshop for San Fernando's tricycle associations.

Building LCP Capacity to Replicate the Clean Air Program

The TSSC has been working with the League of Cities of the Philippines (LCP) to explore the viability of developing an environmental unit that could provide assistance to member cities and replicate successful programs such as the Puerto Princesa CAP. In this quarter, the TSSC facilitated, coordinated and participated in a series of meetings involving the International City/County Management Association (ICMA) and the LCP, resulting in a draft work plan. Several discussions were also arranged by the TSSC with a number of local mayors, representatives from two related USAID programs (ECOGOV and the Energy and Clean Air Program), and key LCP officers and staff to solicit ideas and to validate proposed directions for the work plan.

ICMA approached the Florida League of Cities (FLC) which expressed its willingness and interest in partnering with the LCP. An initial exchange is scheduled for early February to bring FLC representatives to the Philippines and provide a first round of training for the LCP. A Memorandum of Understanding formalizing the assistance and partnership will be signed at that time.

Updating Phased-In Standards for Tricycles

The Philippines Clean Air Act calls for a revision of tricycle emissions standards every two years. Working from the baseline data gathered from implementing the Clean Air Program in Puerto Princesa City and San Fernando City, US-AEP will assist the DENR in developing phased-in standards for tricycles by conducting workshops to update the current standards for tricycles; facilitating stakeholders' consultations on the proposed standards; and assisting the DENR in issuing directives for the adoption of the standards.

Improving Hazardous Waste Management

Establishing a Chemical and Hazardous Wastes Emergency Response Program

In support of Department of Environment and Natural Resources (DENR)'s efforts to develop a Procedural Manual to implement a Chemical and Hazardous Wastes Emergency Response Program (CHWERP) for the Philippines, the TSSC facilitated, organized and accompanied 18 participants from key government agencies on study exchange in October to introduce delegates to models of successful chemical emergency response programs in the US.

In order to involve the private sector in CHWERP, TSSC initiated discussions with the Health, Safety and Environment Officer of TOTAL Philippines and a representative of the Petroleum Institute of the Philippines to explore industry interest in CHWERP and willingness to host a chemical incident exercise during the pilot-testing of the program.

Finally, as part of an integrated, multi-sectoral and community-based approach to the effective and efficient implementation of the CHWERP, TSSC organized a presentation and facility tour of the National Disaster Coordinating Council of the Office of Civil Defense and the Department of Interior and Local Government's People's Action Team Responding Online (PATROL 117) December 15, 2004.

Developing Guidelines on the Use of Wastes as Fuel for Cement Kilns

The TSSC presented findings from the Cement Kiln Permitting and Inspection study tour to the U.S. to learn about developing official guidelines on the use of wastes as alternative fuel and raw materials by cement kilns to EMB officials. As a result of these talks, EMB established a Technical Working Group (TWG) to work closely with TSSC, GTZ and the Cement Manufacturing Association of the Philippines. The TWG will review and finalize the draft guidelines on the use of waste as fuel for cement kilns, and will conduct mock-inspection and capacity-building activities.

The TSSC also participated in the symposium on Dioxin and Furans in Cement Kilns organized by Union Cement Corp. (UCC) and SINTEF, which is the largest independent research organization in Scandinavia. The symposium is part of UCC initiatives to disseminate information and offer alternative methods for management and disposal of solid and hazardous wastes.

TSSC Hazardous Waste expert Ninette Ramirez reviewed and commented on the proposal for a Quick Response Grant (QRG) submitted by Eurasia Environmental Associates, LLC for conducting training for permitting and inspection of cement kilns using hazardous waste as fuels in the Philippines.

Institutionalizing a Certificate Course on Hazardous Wastes Management

The first module of the new 4-module Hazardous Waste Management Certificate Course was offered to interested students on November 2004 at the National Engineering Center, UP Diliman. The course, developed in collaboration with US-AEP, US EPA, US DOD and UP Diliman, aims to establish a knowledge base on hazardous waste management within Philippine government agencies, as well as a committed, confident cadre of leaders in the

field. Certified hazardous wastes managers from the initial offering of the course were tapped to be the lecturers and facilitators for the module.

Improving Solid Waste Management

The annual conference of the Solid Waste Management Association of the Philippines (SWAPPCON 2004) brought together solid waste practitioners nationwide to exchange ideas and learn best practices in environmental management. TSSC identified and facilitated the participation of 15 city environmental officers in the conference who are interested in developing effective solid waste management plans for their cities.

The TSSC also facilitated the travel and participation of five key people to a workshop on developing sustainable funding mechanisms for solid waste management in October. This activity is part of US-AEP's assistance to help local government units identify technology and solutions for solid waste management.

Improving Energy & Industry

In this quarter, the TSSC continued to provide assistance to DENR's Philippine Environment Partnership Program (PEPP) to develop an environmental management plan for three participating industry associations (QSR Management Link Association, Philippine Association of Paint Manufacturers, and CropLife). Initial environmental reviews (IERs) are ongoing, and system documentation has begun. At least one quick service restaurant has submitted its proposed environmental management plan.

Through a TSSC grant, the Management Association of the Philippines (MAP) successfully completed the draft manual for the implementation of the PEPP program. TSSC facilitated a review of the draft Manual with EMB in November and solicited final comments. The final draft manual will be delivered to EMB on or before January 10, 2005.

Improving Environmental Governance

Piloting a Regional Water Council in Cebu

The TSSC held discussions with the National Water Resources Board (NWRB) and the Philippine Water Council regarding US-AEP's assistance to the NWRB for a Region 7 Council based in Cebu City. Specifically, the activity will assist the Regional Council in the development of an appropriate governance structure to manage water resources, consistent with the related provisions of the Clean Water Act.

The TSSC is currently working with the US-AEP Country Manager to finalize the scope of work for creating Regional Councils that will decentralize the functions of the NWRB.

Greening the Judiciary

The TSSC conducted initial discussions with The Asia Foundation (TAF), and with the Earth Council to begin development of interactive training modules for the judiciary to complement the environmental law offerings of the Philippine Judicial Academy (PHILJA).

The TSSC proposed using PHILJA's numerous existing materials and working with environment experts and institutions who have already worked with PHILJA (such as Tanggol Kalikasan, the Manila Observatory, the UP Law Center, The Asia Foundation, among others) to produce materials which will focus mainly on non-legal environmental topics, such as basic environmental science and environmental economics. These materials are intended to enrich and provide useful context for PHILJA's environmental law-related initiatives.

SRI LANKA**Improving Air Quality**

First National Symposium on Air Resources Management in Sri Lanka

As part of its strategic and sustained assistance to Sri Lanka's Clean Air Action Plan, US-AEP supported the first National Symposium on Air Resource Management "Air That We Breathe" on December 2-3, 2004 in Colombo. The TSSC provided a grant to conduct the symposium that provided a platform for air quality professionals to share their experiences, collect best practices for policy decision-making, and promote research. Topics included: air quality monitoring, indoor air pollution, vehicular air pollution, policies, air pollution and public health, trans boundary air pollution, climate change, awareness and training.

Sri Lanka Clean Air Initiative

TSSC provided technical assistance and leadership to develop a greenhouse gas (GHG) emission reduction project at the Bloemendal Waste Dump in Colombo as part of a waste reduction and renewal energy initiative. Shehnaz Atcha, Sustainable Energy Specialist with the Louis Berger Group, provided an initial assessment and developed a road map to relieve the waste load on the Bloemendal site that is already at full capacity and explore the potential carbon market in Sri Lanka.

Ms. Atcha made presentations to the Central Environmental Authority (CEA), and the Ministry of Environment and Natural Resources (MENR) – the Sri Lankan government's regulatory and policy-making bodies -- explaining how carbon markets operate and how Sri Lanka can participate. In addition she made presentations to USAID and to a private sector group Asiacaarbonnet interested in developing carbon markets in Sri Lanka. The TSSC provided critical mediation support among stakeholders to ensure participation and engage the surrounding community and relevant NGOs. The draft road map is currently being reviewed by representatives of stakeholder organizations.

Improving Water Quality

TSSC provided guidance to the Industrial Services Bureau (ISB) for its Quick Response Grant (QRG) application for verification of wastewater treatment technologies [Oil Water Separators] to treat effluents from vehicle service stations.

TSSC continued its support of Midwest-Sri Lanka Environmental Alliance Project. The project builds on Sri Lankan government efforts to assess and improve the quality of the Kelani River, which is the potable water source for the City of Colombo. US-AEP is bringing together community, industry, government and academic stakeholders to develop sustainable river water management practices.

TSSC staff drafted a report detailing the progress made during the August-September trip of Ms. Young and Ms. Mihalik, including recommendations for both immediate and long-term

tasks. TSSC continued developing case studies that will illustrate the benefits of water conservation.

Eco-friendly Soil Erosion Control System Using Coir Products

US-AEP assisted EcoProtect Engineering Ltd of Sri Lanka, Coco Technologies Corporation of the Philippines, Coir Council International of Sri Lanka, and the University of Moratuwa to form a partnership to test and promote soil erosion control systems using coir products. US-AEP and the TSSC formulated a small grant to facilitate this activity that will help to strengthen surface water pollution strategies in Sri Lanka. The State of Minnesota is interested in the erosion control aspects of this work.

Improving Waste Management

Municipal Solid Waste Management

In order to continue support for improved solid waste management and improved urban service delivery, TSSC coordinated the participation of nine Sri Lankan delegates to a Municipal Solid Waste Management exchange to India in October. The exchange provided a number of learning opportunities including e-governance in municipal serviced delivery, municipal solid waste management, medical waste disposal and land filling of industrial and hazardous waste. Delegates also studied the legislative framework adopted in India for solid waste management, including source separation of waste, use of financial systems to manage waste, private sector means to dispose medical and industrial waste, and the use of NGO's in collection and management of waste.

Improving Environmental Governance

Asian Environmental Compliance and Enforcement Forum

The TSSC facilitated the participation of two Sri Lankan delegates in the Asian Environmental Compliance and Enforcement Forum on October 27-28 in Bangkok, Thailand. Manel Jayamanne, Director General of Central Environmental Authority of Sri Lanka and Dr. Mubarak, Director, Industrial Technology Institute of Sri Lanka participated in this forum.

Administration

TSSC conducted a review and follow up of past activities and support to determine successes and achievements resulting from US-AEP environmental initiatives over the last several years. TSSC is synthesizing those achievements and developing success stories on several programs, including: 1) support for a Clean Air Initiative that resulted in significant reductions in sulfur and lead levels in ambient air; 2) developing a high quality, sustainable composting program to reduce the solid waste load in Colombo; and 3) supporting innovative technologies such as a beer brewery's successful anaerobic wastewater treatment program to combine grain waste and untreated wastewater to produce methane gas as a fuel source.

Nilakshi Gunathilake, TSSC Program Specialist, reported to work on November 22, 2004.

The Sri Lanka TSSC office moved to a larger space on the same floor in the East Tower of the World Trade Centre in Colombo.

THAILAND**Improving Air Quality**

Developing Integrated Emission Strategies for Existing Land Transport (DIESEL)

Several technical and policy options exist to control diesel emissions, ranging from improved transport management and driver behavior to new technologies based on cleaner diesel or alternative fuels. However, there is limited real-world information and data on the local and global emission reductions of a combination of policies and technologies in the context of developing countries, and these crucial information gaps hamper the selection and implementation of effective measures and programs to reduce diesel emissions in urban transport.

The Developing Integrated Emission Strategies for Existing Land Transport (DIESEL) Program aims to develop knowledge-based reference tools and to propose strategic policy options in order to help policymakers implement effective measures for diesel vehicle pollution reduction. Bangkok has been chosen as the location to implement the pilot, as a first step in implementing the DIESEL program.

Through the DIESEL program, the TSSC continued to support the process of developing comprehensive baseline emission testing of diesel vehicles. The test results will be used to estimate emission factors for different diesel vehicle types under conditions more representative of “real-world” conditions, with the objective of estimating overall emissions specific to Thailand. The TSSC is responsible for the acquisition of testing vehicles and for coordinating the daily task of bringing the vehicles to the Pollution Control Department's (PCD's) laboratory for testing. In the three month period October to December, 40 percent of the proposed 160 vehicles were tested.

Improving Water Quality and Waste Management

Promoting Community-Based Environmental Management (CBEM) in the Thachin River Basin

US-AEP has committed to helping promote Community-Based Environmental Management (CBEM) in the Thachin River Basin through a partnership with two other watersheds – the Laguna de Bay in the Philippines and the Chesapeake Bay in the U.S. This project is expected to provide local governments, community organizations, and government agencies in the region with the tools and methods necessary to protect and restore their watershed, and, in the process, provide a participatory model that can be used by other regions to improve the quality of their environmental resources. In general, the project has three main objectives:

1. Strengthen Local Capacity in CBEM
2. Develop pilot projects
3. Strengthen governance systems

Ultimately, the success of this project will be measured by the degree to which community based environmental management can be used to overcome environmental challenges in the Thachin River Basin, which will largely hinge on the continued participation of all the partners and their network of colleagues, citizens, and stakeholders working together to implement specific pollution prevention and watershed protection and restoration measures.

1. Strengthen Local Capacity in CBEM

The TSSC worked to advance the following activities:

- Facilitated and improved coordination between stakeholders;
- The creation of the Thachin Technical Network; and
- Identified possible sites for Organic Vegetable and/or Rice Farm Improvement Pilot Project.

The TSSC, together with US-AEP staff, met with officials from the Regional Environmental Office 5 (REO 5), the Pollution Control Department (PCD), the Department of Environment Quality Promotion (DEQP), the CivicNet (NGO), Mahidol University, and Dave Nemazie from the University of Maryland Center of Environmental Science (UMCES) to coordinate efforts for improving the condition of the Thachin river basin in 2005. The main objective of this meeting was to combine existing individual Thachin improvement projects into a single strategy.

The TSSC worked closely with some of the partners to plan a one day Technical Workshop in Nakorn Pathom Province to develop the Thachin Technical Network (TTN) in the region. The TTN will be comprised of technical experts in the fields of water quality management, watershed management, agriculture, and environmental studies, who will share their know-how with communities and local governments.

The TSSC also worked closely with US-AEP and REO5 to arrange a two-day program for U.S. and Thai partners including Dave Nemazie from UMCES, Thailand US-AEP team, senior officials of REO 5, and key members of 4 We Love Thachin Clubs (local NGOs). This meeting was used to explore the idea of the Thachin Technical Network with the We Love Thachin Club and discuss how the clubs can participate in future activities.

2. Develop Pilot Projects

The TSSC, Dave Nemazie, and US-AEP staff visited two agriculture farms; an organic rice farm and fish farm. These visits were part of a pilot project that aims to minimize the use of chemical fertilizers and pesticides in Thachin basin farms. We evaluated potential sites for the project and identified current farming practices.

3. Strengthen Governance Systems

The TSSC recognized the potential contribution of Mahidol University and CivicNet and sought out their participation in the Thachin River Basin CBEM Project. The TSSC encouraged them to apply for a grant from The Asia Foundation (TAF) to establish a single platform representing the four We Love Thachin clubs and work collectively on water pollution problems in the Thachin River Basin. The Asia Foundation awarded 1.8 million

Baht to Mahidol University, in partnership with the CivicNet Group (Thai NGO) to achieve this.

The TSSC monitors the series of workshops developed by Mahidol University and CivicNet that showcase the collaborative approaches among several groups of stakeholders. The first workshop was organized for an academia group on December 14-15 at the Rose Garden Resort in Nakorn Pathom province. The main objective of this meeting was to describe the project activities, assess people's perception about water quality problems in the Thachin, their expectations, involvement to improve the situation, and their willingness to collaborate in the Thachin restoration.

Improving Environmental Governance

CityLinks Partnership to Improve Municipal Environmental Management in Thailand

Most cities in Thailand have five-year plans as required by the central Thailand government, yet most are ill prepared to meet the 2006 deadline to implement them, largely because the plans lack financial plans, priorities, schedules, and public involvement.

Through a series of project components, US-AEP will address these issues and seek to provide technical assistance through several partnerships that will link several Thai cities together with a 'mentor' city in Portland, Oregon.

ICMA has helped facilitate a long-term partnership between Portland and the Thai cities of Chiang Mai, Phuket, and Khon Kaen focusing on strengthening municipal management, improving public service delivery, and encouraging democratic participation by their citizens.

In November and December of 2004, the TSSC provided logistical and technical support (including language interpretation) for the Portland team in a series of meetings with municipal officials.

City officials worked with the Portland team to involve the public in planning redevelopment projects and in developing wastewater fees.

The TSSC provided a summary of the issues identified by municipal officials and the Portland team to the US-AEP Thailand Program Manager and continues to provide communication and coordination between the Thai and U.S. partners.

TSSC Senior Regional Urban Advisor, Anthony Kolb, reviewed and commented on the proposal for a Quick Response Grant (QRG) submitted by the International City/County Management Association (ICMA). The grant will be used by ICMA, the Portland partners and the city of Khon Kaen to develop training curriculum and materials on public participation and will be a compilation of the lessons they have learned from the CityLinks Partnership over past two years.

Administration

In this quarter, the TSSC provided orientation to the new members of the USAID Thailand Country Staff which included US-AEP Thailand Program Manager, Orestes Anastasia, and Program Development Specialist, Dr. Piyachat Pradubraj,

Robin Taylor joined the TSSC as Country Program Coordinator for Thailand and TSSC Washington provided an orientation program for her.

VIETNAM

Improving Air Quality*Cleaner Vehicles and Fuels*

TSSC worked with Lucas Heer and his staff from the Swiss Foundation for Technical Cooperation to incorporate US-AEP's recommendations on fuel and vehicle specifications and air monitoring into the Swiss-Vietnamese Clean Air Program (SVCAP). The overall goal of SVCAP is to prevent further degradation of the air quality in Hanoi and surroundings. A key objective is to finalize the National Action Plan and facilitate its implementation. Our work with SVAP provides an opportunity to leverage resources and bolster our partnership to ensure a better outcome for the clean air and vehicle program.

The Vietnamese government recognizes the need to improve air quality through tightened new vehicle and fuel standards and has developed a roadmap with timeline and milestones to meet relevant Euro Standards. In December, the TSSC provided a small grant to the Technical and Scientific Consultant and Service Centre (TSC) to work with Vietnam Register (VR) to undertake a survey of oil companies and vehicle manufacturers to determine their capabilities to produce fuel and vehicles meeting Euro standards. A technical task team will evaluate the survey results to determine relative costs to meet fuel and vehicle specifications.

The TSSC facilitated an exchange for two delegates who are taking a lead role in revising fuel specifications to attend the World Fuel Conference in Singapore in November. Delegates met with technology experts. Topics included: alternative fuels, renewable fuels, blending components, and fluid additive technologies.

TSSC provided coordination support to EMBARQ, the World Resources Institute's Center for Transport and Environment to work for solutions to transport problems in the developing world's major cities. EMBARQ has been working with high-level stakeholders in Hanoi and two other Asian cities (Pune, India and Xi'an China) in the "Partnership for Sustainable Urban Transport in Asia" (PSUTA). Supported by the Asian Development Bank, the Swedish International Development Agency, and EMBARQ itself, the PSUTA engages leaders in the three cities to improve the sustainability of present and future transport. The TSSC assisted with a November event that articulated sustainable transport indicators to **help decision-makers diagnose problems and publicize their achievements**. Participants agreed on steps each city should take to identify key needs for transport indicators, illuminate the gaps in their indicators, map how to fill those gaps, and discuss strategies for launching the required data gathering. The output was presented by each city at the BAQ 2004.

Cleaner Air

US-AEP supported ADB/CAI-Asia and the Health Effects Institute to undertake the Poverty and Air Pollution reconnaissance Mission in November. The objective of the mission is to develop a study design for gathering air quality and health data in Vietnam that could be used as a model in other parts of Asia. TSSC took a lead coordination role in setting up the

meetings with the relevant private and public agencies in Ho Chi Minh City and actively participated in the study design.

Air Quality Monitoring

A US-AEP TSSC grant was awarded to the Center for Environmental Engineering of Towns and Industrial Areas (CEETIA) to train staff and monitor roadside air pollution in Hanoi using mobile Air Quality Monitoring Stations. CEETIA undertook the first roadside air pollution monitoring on the Southern Bus Parking Station Highway One into Hanoi in November. The measurements included: SPM dust, sulfur dioxide, carbon monoxide, nitrogen oxides, ozone, micro-climate parameters, and traffic flow. The data from the monitoring site will be used to quantify pollution levels and the causes and reasons for the pollution.

Air Pollution

TSSC moderated a group discussion on launching a pollution charge program for a US-AEP workshop held in collaboration with the Department of Natural Resources and Environment Vietnam. Participants, including many technical experts and decision makers, explored revenue collection and use, as well as enforcement issues.

The TSSC provided input in to a proposal of the East-West Center, Hawaii to perform an assessment of traffic accidents related to driver and pedestrian exposure to air pollution. Levels of carbon monoxide can reduce a pedestrian's vigilance and a driver's performance. The proposal will be submitted to the proposed urban transport development project in Hanoi.

Improving Waste Management

TSSC met with Dr. Hinz Leuenberger, the proposed lead consultant for the Swiss Agency for Development and Cooperation (SDC) Poly-Chlorinated Biphenyl (PCB)-Elimination project in Vietnam, to exchange ideas and plan activities. It is expected that the SDC project will draw on the PCB Management Plan that TSSC is developing with the Vietnam power sector to help define and adopt policies and strategies to reduce PCBs. TSSC provided a detailed outline of the PCB exchange to the U.S.

Affinity Consultants provided technical assistance during the PCB exchange to the U.S. in September 2004, including a list of prioritized steps that must take place in order for Vietnam to implement an effective PCB Management Program. The TSSC provided guidance to Affinity to develop a Quick Response Grant proposal to work with the Government of Vietnam and Vietnam Electricity Corporation to develop a PCB Management Plan.

Improved Environmental Governance

Responsible Care

The TSSC is supporting the Chemical Society of Vietnam (CSV), which is taking the lead role in Vietnam to initiate and implement Responsible Care (RC) activities within the chemical and allied industries in Vietnam. CSV identified and brought together representatives from key industries and government, an important first step in launching Responsible Care. TSSC, on behalf of CSV, is requesting financial support from chemical companies to sponsor a networking meeting to exchange information and experience on implementing RC, and to identify benefits and opportunities for RC.

TSSC consultant Conchita Silva worked with the Chemical Society of Vietnam to review and develop Responsible Care's organizational charter, short and long term plan, training and promotional materials, a review of best international practices, and the procedures for joining the International Council of Chemical Associations.

National Water Resources Strategy (NWRS)

As a result of rapid economic development and urbanization, the Government of Vietnam has become increasingly concerned with the cumulative impacts of rapid growth on water supplies, including natural river and aquifer processes. In December, TSSC developed a project activity which includes short term technical assistance to assist the Office of the National Water Resource Council of Vietnam to develop a decision making process for determining allowable levels of water extraction and management for the rivers and aquifers of Vietnam. The decision making process will feed into to the development of the National Water Resources Strategy (NWRS), which is supported by the ADB and Danida. The NWRS will provide a clear, coordinated, multi-sectoral strategic plan for the sector.

OPERATIONAL SUPPORT

Grants and Short Term Technical Assistance (STTA)

During the quarter, in addition to overseeing 15 on-going TSSC grants, TSSC provided technical and administrative assistance in the development, review, and processing of the following:

- Grant to **Ecotourism & Conservation Society of Sikkim (ECOSS)**, India, to support a community-based environmental initiative called Eco Watch.
- Grant to **All India Institute of Local Self Government (AIILSG)**, India, for a water and energy efficiency information/awareness campaign.
- Grant to **Clean Air Sri Lanka (CleanAir SL)** for the first national symposium on air resource management called “Air that We Breathe.”
- Grant to **Technical and Scientific Consultant and Service Centre (TSC)** of Vietnam to develop a road map for achieving Euro standards for vehicles and fuels.
- Grant to **Swisscontact** for Personal Exposure Monitoring (PEM) Project and Management of PEM equipment, Indonesia.
- Grant to **EcoProtect Engineering** to introduce erosion control using local coir, Sri Lanka.
- Grant to **Environmental Management Lanka (EML)** for improving environmental management service delivery in Kotte Municipality, Sri Lanka.
- Grant to **Tagbalay Foundation**, Philippines, for a public awareness campaign to maximize the impact of Puerto Princesa’s Clean Air Program.

In addition to processing 8 on-going and recently completed STTA assignments, TSSC prepared scopes of work, contractual STTA documents, and approval memos for the following STTA activities:

- Uday Kelkar and Robert Jarnis to conduct a feasibility study on integrated water resource management for the Delhi Jal Board, India.
- Sandrine Dixon-Decelve to draft a national gasoline and diesel fuel specifications plan in support of US-AEP’s Cleaner Vehicles and Fuels Project, Vietnam.
- Michael Walsh to continue his work to develop a road map for achieving Euro fuel standards, Vietnam.
- Bruce Fitzgerald to conduct national-level water demand analysis to assist the Vietnam Electricity Corporation, Vietnam.
- Kariyawasam, Marikar and de Alwis for Dengue fever mapping and prevention, Sri Lanka.
- Presana Shah to assist India’s water and energy efficiency demonstration project.
- Sheha Palnitkar to support an eco housing program and specifically to improve “advanced local management,” in India.

Quick Response Grants Program

TSSC developed a Request for Quick Response Grant (QRG) Applications and advertised on the US-AEP Web site and with appropriate organizations, including Air Water Management Association (AWMA), Water Environment Federation (WEF), and the Council for State Governments. TSSC, in coordination with the US-AEP Regional Director and Country Managers, developed a process, timeline and evaluation criteria for reviewing grant applications. Seventeen grant applications were received from all six US-AEP countries. TSSC/Washington conducted the initial review of the proposals and assessed the technical merit, viability, completeness, and appropriateness of each proposal. The clarity, completeness, and reasonableness of the proposed budget was also assessed. An evaluation form was completed for each application and TSSC technical staff provided a preliminary rating for each proposal with strengths and weaknesses defined. TSSC Bangkok worked with US-AEP staff in Thailand to complete the evaluation.

Communications

Pierre Beaulne joined the TSSC as the Senior Communications Manager for US-AEP in the TSSC Regional Office in Bangkok.

The TSSC continues to collate and distribute the US-AEP At-A-Glance newsletter at the request of the US-AEP Regional Manager Winston Bowman. The bi-weekly publication informs all US-AEP partners of recent activities conducted in the program and provides information on upcoming activities.

TSSC Washington provided editing assistance for success stories (Philippines: Puerto Princesa Clean Air Project and India: Rain Harvesting Project) and submitted the final version of the Philippines story to USAID for inclusion in their Success Story Database. TSSC staff also drafted a press release on USAID Administrator Natsios' visit to India.

US-AEP print materials highlighting US-AEP accomplishments and objectives in the six US-AEP countries and the regional program were finalized and printed including: a regional brochure, a folder, and fact sheets on the six US-AEP countries. Copies of the materials have been distributed to each country office.

TSSC Bangkok designed a new exhibit booth, creating a visual theme that reflects the new program emphasis of US-AEP on urban environmental issues. The exhibit, which features US-AEP printed materials and photos, was showcased at the Better Air Quality Conference (BAQ) and 4,800 pages of print materials, including flyers from each country detailing specific air quality management activities and accomplishments, were distributed to attending delegates.

TSSC assisted with distribution of US-AEP communications materials during the conference and met with various US-AEP staff and partners to discuss specific communication needs.

The new US-AEP Web site concept design and sitemap has been completed. The newly designed site will be launched in January 2005, with additional features fully integrated by the end of February 2005.

Regional Operations Support

Regional Urban Specialist Tony Kolb joined the TSSC in Bangkok in December to provide senior-level support to the US-AEP Regional Director and Country Managers.

The Bangkok TSSC Operational Support Team provided additional regional support to the Country Managers and the Regional US-AEP Director in the finalization of the 2005 work plans. This primarily involved resolving outstanding questions related to available funds, format, and additional information required on some activities.

TSSC completed on-going tasks, including: assembling, editing and writing the TSSC monthly and quarterly reports; tracking TSSC-related travel; maintaining a trip report inventory; and developing an online TSSC Library. TSSC communications staff provided regular monitoring and maintenance of the US-AEP Thailand network infrastructure, assistance with computer issues of the other TSSC Country Offices, updating of the US-AEP Contact Directory and providing in-house technological support to STTA hires.

Reporting and Program Results

US-AEP 2004 Annual Report

During this quarter, the TSSC provided assistance in the preparation of the US-AEP Annual Report for submission to USAID summarizing the past year's activities and program results measured against the Performance Monitoring Plan (PMP) developed and adopted in the year 2000.

Program data was collected from US-AEP Country Managers and other program partners, verified and collated, in order to gauge program successes and areas of concern. At the request of the US-AEP Regional Manager, the TSSC compiled activity updates by country, and gathered cost-share data in order to prepare a detailed Results Report for submission in the 2nd Quarter of FY05.

OPIN Clean Energy Initiative Report

TSSC collected data from US-AEP field offices and assembled the narrative and quantitative summaries for the OPIN Water Report (clean water and efficient use of freshwater and coastal resources) and the OPIN reporting for the President's Clean Energy Initiative. TSSC also reported on trade capacity building activities in Thailand for the US Trade Representative's meeting with the Government of Thailand.